

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Reissue Patent Application of

Date: April 3, 2007

SERGIO LANDAU

Reissue Serial No. 10/627,552 (for Patent No. 6,264,629)

Filed : July 24, 2003 (Issued July 24, 2001)

For : SINGLE-USE NEEDLE-LESS HYPODERMIC  
JET INJECTION APPARATUS AND METHOD

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**COMMUNICATION TO THE EXAMINER**

In response to the Office action mailed October 3, 2006, which included a restriction requirement, applicant filed a divisional reissue application canceling claims 1-20 and adding claims 21-37, as instructed by the Examiner. This divisional reissue application directed to claims 21-37 was filed on January 3, 2007, and assigned Serial No. 11/649,396.

Applicant understands that the Examiner will suspend the present reissue application (constructively elected claims 1-20). It is Applicant's further understanding that once new claims 21-37 (pending in the divisional reissue application) are determined allowable, such claims will be merged with suspended claims 1-20 (see October 3, 2006 Office action, Pages 5 and 6). Applicant therefore believes that a complete response to


the Office action mailed October 3, 2006, was submitted within the shortened statutory period ending on January 3, 2007.

A copy of the preliminary amendment for the divisional reissue application and the filing receipt are enclosed.

If the Examiner has any questions, or if a telephone interview would in any way advance prosecution of the application, please contact the undersigned attorney of record.

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being filed electronically via the USPTO's Electronic Filing System on April 3, 2007.

  
Merissa R. Thompson

Respectfully submitted,

  
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## UNITED STATES PATENT AND TRADEMARK OFFICE

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APPL. NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
11/649,396	01/03/2007	3767	600	BJT341RIDIV	4	17	4

CONFIRMATION NO. 8990

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## FILING RECEIPT



\*OC000000022549132\*

PEH  
BJT341RIDIV

Date Mailed: 02/20/2007

Receipt is acknowledged of this reissue Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Sergio Landau, Residence Not Provided;

Power of Attorney: The patent practitioners associated with Customer Number 23581.

## Domestic Priority data as claimed by applicant

This application is a DIV of 10/627,552 07/24/2003 ✓  
which is a REI of 09/252,131 02/18/1999 PAT 6,264,629 ✓  
which is a CIP of 09/195,334 11/18/1998 PAT 6,096,002 ✓

## Foreign Applications

If Required, Foreign Filing License Granted: 02/16/2007

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US11/649,396**

Projected Publication Date: None, application is not eligible for pre-grant publication

Non-Publication Request: No

Early Publication Request: No

\*\* SMALL ENTITY \*\*

**DOCKETED**  
By \_\_\_\_\_ Date \_\_\_\_\_

**Title**

Single-use needle-less hypodermic jet injection apparatus and method ✓

**Preliminary Class**

604

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Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

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For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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**Title 37, Code of Federal Regulations, 5.11 & 5.15**

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Divisional Reissue Patent Application of

SERGIO LANDAU

Date: January 3, 2007

Application Serial No.: 10/627,552

Our File: BJT 341RIDIV

For Patent No. : 6,264,629

Examiner: Andrew Gilbert

Issued : July 24, 2001

For : SINGLE-USE NEEDLE-LESS HYPODERMIC  
JET INJECTION APPARATUS AND METHOD

Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

**PRELIMINARY AMENDMENT FOR DIVISIONAL APPLICATION**

In response to the Office action mailed on October 3, 2006 please amend the above-identified patent application, prior to examination, as follows:

Amendments to the Specification	None
Amendments to the Claims	Begin on page 2
Amendments to the Drawings	None
Remarks	Begin on page 8

### **Amendments to the Claims:**

Please make the following amendments to the claims (material to be inserted is in underline, and material to be deleted is in [~~brackets and strikeout~~]).

1-20. (Cancelled)

21. (New) A needle-less injection device, comprising:

a liquid container having an outlet orifice;

an injection orifice fluidly coupled with the outlet orifice and configured to inject liquid forwardly out of the needle-less injection device substantially along an injection axis into an injection site;

a plug member displaceable from a first position, in which it sealingly closes the outlet orifice, to a second position, in which liquid is permitted to flow out of the outlet orifice; and

plural bypass conduits defined between the outlet orifice of the liquid container and the injection orifice when the plug member is in the second position, such that the bypass conduits permit liquid to flow from the outlet orifice past the plug member to the injection orifice,

where the bypass conduits have outer walls with terminal forward end portions that are streamlined and extend at acute angles relative to a portion of the injection axis extending rearwardly of the terminal forward end portions, to inhibit turbulence occurring between the plug member and the injection orifice.

22. (New) The device of claim 21, where the terminal forward end portions of the outer walls of the bypass conduits are located forward of the plug member when the plug member is in the second position.

23. (New) The device of claim 22, where the plug member moves forwardly along the injection axis when displaced from the first position to the second position.

24. (New) The device of claim 22, where the bypass conduits converge forwardly of the plug member when the plug member is in the second position, such that streams of liquid flowing past the plug member through the bypass conduits converge into a single stream between the plug member and the injection orifice.

25. (New) The device of claim 21, further comprising a chamber fluidly coupling the outlet orifice with the injection orifice, and a plurality of ribs extending radially inward from an inward facing wall surface that defines the chamber.

26. (New) The device of claim 25, where the bypass conduits are defined by the ribs, inward facing wall surface of the chamber, and by the plug member when the plug member is in the second position.



27. (New) The device of claim 26, where the plug structure moves forward along the injection axis when displaced from the first position to the second position, and where the ribs are configured to block the plug member from further forward movement toward the injection orifice when the plug member is in the second position.

28. (New) A needle-less injection device, comprising:  
a liquid container having an outlet orifice;  
an injection orifice fluidly coupled with the outlet orifice and configured to inject liquid forwardly out of the needle-less injection device substantially along an injection axis into an injection site;

a plug member displaceable from a first position, in which it sealingly closes the outlet orifice, to a second position, in which liquid is permitted to flow out of the outlet orifice; and

a chamber interposed between and fluidly coupling the outlet orifice with the injection orifice, the chamber being adapted to receive and hold the plug member when the plug member is displaced to the second position, so that the plug member does not prevent liquid from flowing from the outlet orifice to the injection orifice,

where plural bypass conduits are defined within the chamber such that, when the plug member is in the second position, the bypass conduits permit liquid to flow from the outlet orifice past the plug member to the injection orifice,

and where each bypass conduit has an outer wall that extends non-perpendicularly relative to the injection axis along an entire length of the bypass conduit.

29. (New) The device of claim 28, where for each bypass conduit, the outer wall has a terminal forward end portion that is streamlined and extends at an acute angle relative to a portion of the injection axis extending rearwardly of the terminal forward end portion, to inhibit turbulence occurring between the plug member and the injection orifice.

30. (New) The device of claim 29, where for each bypass conduit, the terminal forward end portion of the outer wall is located forward of the plug member when the plug member is in the second position.

31. (New) The device of claim 30, where the plug member moves forwardly along the injection axis when displaced from the first position to the second position.

32. (New) The device of claim 30, where the bypass conduits converge forwardly of the plug member when the plug member is in the second position, such that streams of liquid flowing past the plug member through the bypass conduits converge into a single stream between the plug member and the injection orifice.

33. (New) The device of claim 29, where the chamber includes a plurality of ribs extending radially inward toward the injection axis.

34. (New) The device of claim 33, where the bypass conduits extend between the ribs and are defined in part by the ribs.

35. (New) The device of claim 34, where the plug member moves forward along the injection axis when displaced from the first position to the second position, and where the ribs are configured to block the plug member from further forward movement toward the injection orifice when the plug member is in the second position.

36. (New) A needle-less injection device, comprising:  
a liquid container having an outlet orifice;  
an injection orifice fluidly coupled with the outlet orifice and configured to inject liquid forwardly out of the needle-less injection device substantially along an injection axis into an injection site; and

a plug member displaceable from a first position, in which it sealingly closes the outlet orifice, to a second position, in which liquid is permitted to flow out of the outlet orifice,

where the plug member contacts a plug capture structure when in the second position, and where plural bypass conduits are formed in the plug capture structure to permit liquid to flow from the outlet orifice past the plug member to the injection orifice, and where the bypass conduits have outer walls with terminal forward end portions that are streamlined and extend at acute angles relative to a portion of the injection axis

extending rearwardly of the terminal forward end portions, to inhibit turbulence occurring between the plug member and the injection orifice.

37. (New) A needle-less injection device, comprising:

a container having an outlet orifice;

an injection orifice configured to inject liquid forwardly out of the needle-less injection device substantially along an injection axis into an injection site; and

a plug member displaceable from a first position, in which it sealingly closes the outlet orifice, to a second position, in which liquid is permitted to flow out of the outlet orifice and to the injection orifice,

where, in the second position, the plug member abuts a plug capture structure disposed between the outlet orifice and the injection orifice, and

where a plurality of bypass conduits are formed in the plug capture structure to permit liquid to flow from the outlet orifice around the plug member along a plurality of bypass flowpaths that converge forwardly of the plug member between the plug member and the injection orifice, each bypass conduit being shaped so that, liquid emerging from the bypass conduit into where the bypass flowpaths converge flows in an acute direction relative to a portion of the injection axis extending rearwardly from where the bypass flowpaths converge.

## REMARKS

In the Office action mailed October 3, 2006 for Reissue Application Serial No. 10/627,552, claims 1-37 were pending. The Examiner issued a restriction requirement stating that originally issued claims 1-20 and new claims 21-37 were distinct subcombinations. The Examiner further stated that unamended claims 1-20 were constructively elected and withdrew new claims 21-37 from consideration. The Examiner then instructed Applicant to file a divisional reissue application to have claims 21-37 examined.

The undersigned attorney of record spoke with Examiner Andrew Gilbert on December 14, 2006 to obtain further information regarding the process for filing a divisional reissue application and was told to contact Supervisor Kevin Sirmons as Examiner Gilbert was not familiar with such a procedure. Telephone messages were left for Examiner Sirmons on December 14, 2006 and January 3, 2007, but no response has been received.

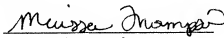
Applicant is therefore submitting form PTO/SB/05, a copy of issued patent 6,264,629, and this preliminary amendment adding claims 21-37 and cancelling claims 1-20 in response to the restriction requirement. It is Applicant's understanding that once new claims are determined allowable, such claims will be merged with suspended reissue claims 1-20 (October 3, 2006 Office action, Page 5, Paragraphs 8-9).

Please contact the undersigned attorney of record if there are any questions or comments regarding the Preliminary Amendment, or the application in general.

Respectfully submitted,

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on January 3, 2007.

  
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